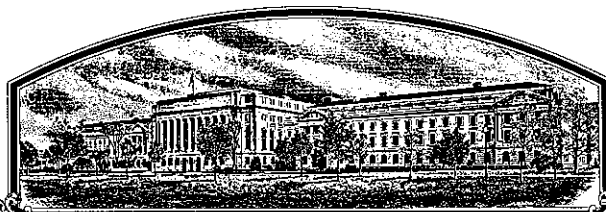


No.

8200165



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Northrup King Co.

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT 1942, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'S69-96'



In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington
this 28th day of April in
the year of our Lord one thousand nine
hundred and eighty-three.

Attest:
Kenneth
Acting
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

John R. Block

Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

INSTRUCTIONS: See Reverse.

1a. TEMPORARY DESIGNATION OF VARIETY M770414, 77-414		1b. VARIETY NAME S69-96		FOR OFFICIAL USE ONLY PV NUMBER 8200165	
2. KIND NAME Soybeans		3. GENUS AND SPECIES NAME Glycine max		FILING DATE 8/25/82	TIME 11:00 A.M. P.M.
4. FAMILY NAME (BOTANICAL) Leguminosae		5. DATE OF DETERMINATION February, 1980		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 8/25/82 4/11/83
6. NAME OF APPLICANT(S) Northrup King Co.		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P. O. Box 959 Minneapolis, MN 55440		8. TELEPHONE AREA CODE AND NUMBER 612-781-8011	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Delaware, 1896		11. DATE OF INCORPORATION 1896
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Robert W. Romig Northrup King Co. P. O. Box 959 Minneapolis, MN 55440					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

August 20, 1982

(DATE)


(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.



EXHIBIT A

Origin and Breeding History of S69-96 Soybeans

- 1972 - 1975 The cross 'Dare' x 'York' was made and advanced to F₄ at the McNair Seed Co. research farm at Laurinburg, NC. In November, 1975, single plants were selected and threshed individually.
- 1976 Plant rows were grown from the single plants harvested in 1975. One of these, numbered 1439, was selected for testing in a preliminary yield trial in 1977.
- 1977 Row 1439 from the 1976 plant row nursery was tested at Laurinburg, NC. From that time the line has been referred to as 77-414 or M770414. Based on performance in this trial, 77-414 was retained for further testing.
- 1978 S69-96 (77-414) was tested at several Southeastern U.S. locations. It was classified as late Group VI maturity. Descriptive characteristics grey pubescence, white flowers, tan pods, and buff hila were identified.
- A small increase block was grown for seed purification. This block was rogued for off-type plants. Descriptive characteristics were confirmed.
- 1979 S69-96 (77-414) was tested at several southeastern U.S. locations by McNair research personnel and as Exp. 3272, in state sponsored trials in South Carolina and Louisiana.
- A five acre Breeder Seed field was grown from the seed produced in 1978. Descriptive characteristics were confirmed.
- 1980 S69-96 (77-414) was again tested at several Southern locations and in state trials (as Exp. 3272) in Alabama, Georgia, Mississippi, North Carolina, Arkansas, and South Carolina. Descriptive characteristics were confirmed.
- Approximately 135 bushels of Breeder Seed were produced in the Laurinburg, NC area. Prebreeder seed was produced from plant progeny rows.
- 1981 S69-96 was tested at several Southern locations in Northrup King and state-sponsored trials.
- Foundation Seed was produced from the Breeder Seed produced in 1980. The field was inspected by the North Carolina Seed Certifying Agency.
- Breeder seed was produced from the Prebreeder seed produced in 1980.

EXHIBIT A - 1981 Con't.

77-414 was approved for Certification by the National Soybean Variety Review Board in December, 1981. It was named S69-96 in March, 1982.

The original Breeder Seed of S69-96 had about 0.5% plants with purple flowers and imperfect black hilum color. These plants were considered to have resulted from either mixture or outcrossing. Breeder Seed produced in 1981 is free of these off-types within AOSCA standards.

S69-96 is stable for normal descriptive characteristics.



EXHIBIT B

Novelty Statement for S69-96 Soybeans.

S69-96 is most similar to 'Davis'. It can be differentiated from Davis on the basis of seed size. S69-96 has significantly smaller seed than Davis. In six trials in 1980 and 1981, seed size for S69-96 averaged 13.5 grams per 100 seeds, while Davis averaged 17.2 grams per 100. This difference is significant at the 0.01 level of probability on the basis of a T-test for paired comparisons. The data are as follows:

	S69-96	Davis
	13.1	19.7
	13.9	19.3
	13.0	17.0
	12.9	16.5
	13.3	15.2
	14.7	15.8
Ave.	13.5	17.2

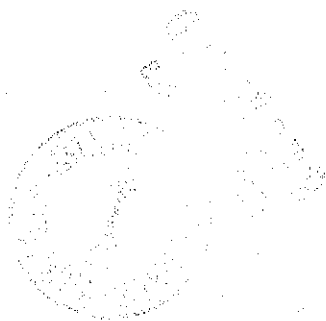
$t = 4.405$. Tabular t for 5 degrees of freedom, 0.01 probability level = 4.032

EXHIBIT B ADDENDUM

NOVELTY STATEMENT FOR 'S69-96' SOYBEAN

The variety 'S69-96' can be distinguished from the variety 'J.E.W. 46' on the basis of pubescence color. The pubescence of 'S69-96' is gray; whereas, the pubescence of 'J.E.W. 46' is light tawny.

The variety 'S69-96' can be distinguished from the variety 'McNair 800' on the basis of leaf color. The leaf color of 'S69-96' is a dark, blue-green; whereas, the leaf color of 'McNair 800' is a medium green.



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (GLYCINE MAX)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Northrup King Co.

ADDRESS (Street and No., or R.F.D. No.; City, State, and ZIP Code)

P. O. Box 959
Minneapolis, MN 55440

FOR OFFICIAL USE ONLY

PVPO NUMBER 8200165

VARIETY NAME OR TEMPORARY DESIGNATION

S69-96

Place the appropriate number that describes the varietal character of this variety in the boxes below.

1. SEED SHAPE:

☐ 1 = SPHERICAL ☐ 2 = SPHERICAL FLATTENED ☐ 3 = ELONGATE ☐ 4 = OTHER (Specify)

2. SEED COAT COLOR:

☐ 1 = YELLOW ☐ 2 = GREEN ☐ 3 = BROWN ☐ 4 = BLACK
☐ 5 = OTHER (Specify)

SHADE:

☐ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

3. SEED COAT LUSTER:

☐ 1 = DULL ☐ 2 = SHINY

4. SEED SIZE

☐ 1 ☐ 4 GRAMS PER 100 SEEDS

5. HILUM COLOR:

☐ 1 = BUFF ☐ 2 = YELLOW ☐ 3 = BROWN ☐ 4 = GRAY ☐ 5 = IMPERFECT BLACK
☐ 6 = BLACK ☐ 7 = OTHER (Specify)

SHADE:

☐ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

6. COTYLEDON COLOR:

☐ 1 = YELLOW ☐ 2 = GREEN

7. LEAFLET SIZE (See Reverse):

☐ 1 = SMALL ☐ 2 = MEDIUM ☐ 3 = LARGE

8. LEAFLET SHAPE:

☐ 1 = OVATE ☐ 2 = OBLONG ☐ 3 = LANCEOLATE ☐ 4 = ELLIPTICAL ☐ 5 = OTHER (Specify)

9. LEAF COLOR (See reverse):

☐ 1 = LIGHT GREEN ☐ 2 = MEDIUM GREEN ☐ 3 = DARK GREEN

10. FLOWER COLOR:

☐ 1 = WHITE ☐ 2 = PURPLE
☐ 3 = OTHER (Specify)

11. POD COLOR:

☐ 1 = TAN ☐ 2 = BROWN ☐ 3 = BLACK

12. POD SET:

☐ 1 = SCATTERED ☐ 2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR:

☐ 1 = GRAY ☐ 2 = BROWN ☐ 3 = OTHER (Specify)

SHADE:

☐ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

14. PLANT TYPES (See Reverse):

☐ 1 = SLENDER ☐ 2 = BUSHY ☐ 3 = INTERMEDIATE

15. PLANT HABIT:

☐ 1 = DETERMINATE ☐ 2 = INDETERMINATE
☐ 3 = OTHER (Specify)

16. HYPOCOTYL COLOR:

☐ 1 = GREEN ☐ 2 = PURPLE

17. SEED PROTEIN:

☐ 1 = A ☐ 2 = B

18. NUMBER OF DAYS TO FLOWERING
(Place a zero in first box (e.g. 0 9) when days are 9 or less.)

☐ ☐ ☐

19. MATURITY GROUP:

☐ 1 = 00 ☐ 2 = 0 ☐ 3 = I ☐ 4 = II ☐ 5 = III
☐ 6 = IV ☐ 7 = V ☐ 8 = VI ☐ 9 = VII ☐ 10 = VIII

20. SIZE OF 10 DAY OLD SEEDLING GROWN UNDER CONSTANT LIGHT (Growth Chamber) AT 25° C. (Place a zero in first box (e.g. 0 2) when size is 9 mm. or less.)

☐ ☐ ☐ MM. LENGTH OF SEEDLING

☐ ☐ ☐ MM. LENGTH OF COTYLEDON

☐ ☐ ☐ MM. WIDTH OF COTYLEDON

21. DISEASE: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

<input type="checkbox"/> 2 BACTERIAL PUSTULE	<input type="checkbox"/> 1 SOYBEAN CYST	<input type="checkbox"/> DOWNY MILDEW	<input type="checkbox"/> PURPLE STAIN	<input type="checkbox"/> 1 POD AND STEM BLIGHT	<input type="checkbox"/> 1 ROOT KNOT
<input type="checkbox"/> FROGEYE	<input type="checkbox"/> STEM CANKER	<input type="checkbox"/> 1 PHYTO-PHTHORA	<input type="checkbox"/> BROWN STEM ROT	<input type="checkbox"/> TARGET SPOT	<input type="checkbox"/> BROWN SPOT
<input type="checkbox"/> BUD BLIGHT	<input type="checkbox"/> WILDFIRE	<input type="checkbox"/> 1 RHIZOCTONIA ROT	<input type="checkbox"/> OTHER (Specify)		

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant shape	Bragg	Petiole angle	Bragg
Leaf shape	Davis	Seed size	Forrest
Leaf color	Elf	Seed shape	Davis
Leaf surface	Davis	Seedling pigmentation	Davis

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY:

VARIETY	NO. OF DAYS TO MATURITY	LODGING SCORE	PLANT HEIGHT	LEAF SIZE		CONTENT		AVERAGE NO. OF PODS PER PLANT	IODINE NO.
				Width	Length	Protein	Oil		
Submitted	154	1.8	91 cm			39.3	20.0%		
Name of similar variety									
Davis	149	1.5	96 cm			40.2	19.7		

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for completing this form:

1. Scott, Walter O. and Samuel R. Aldrich, 1970, Modern Soybean Production, The Farmer Quarterly.
2. Norman, A. G., 1963, The Soybean: Genetics, Breeding, Physiology, Nutrition, Management.
3. McKie, J. W., and K. L. Anderson, 1970, The Soybean Book.

LEAF COLOR: Nickerson's or any recognized color fan may be used to determine the leaf color of the described variety. The following Soybean varieties may be used as a guide to identify the colors listed on the form.

COLOR	VARIETY
Light Green	"Ada"
Medium Green	"Wilkin"
Dark Green	"Swift"

LEAF SIZE: The following varieties may be used as a guide to identify the relative size leaves.

SIZE	VARIETY
Small	"Amsoy"
Medium	"Bonus"
Large	"Anoka"

PLANT TYPE: The following varieties may be used as a guide to identify the plant type.

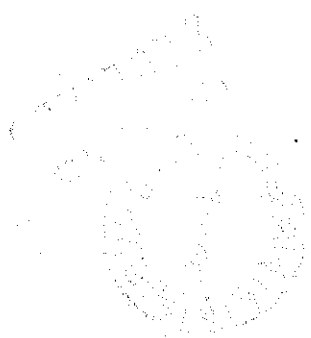
TYPE	VARIETY
Slender	"Vansoy"
Intermediate	"Wirth"
Bushy	"Adelphia"

EXHIBIT D

Additional Description of S69-96 Soybeans.

S69-96 is a late Maturity Group VI variety maturing somewhat later than Centennial and Davis. It has white flowers, grey pubescence, tan pods, and spherical seeds with shiny yellow seedcoats and buff hila. Leaves of S69-96 have a dark, slightly blue-green color which is rather distinctive.

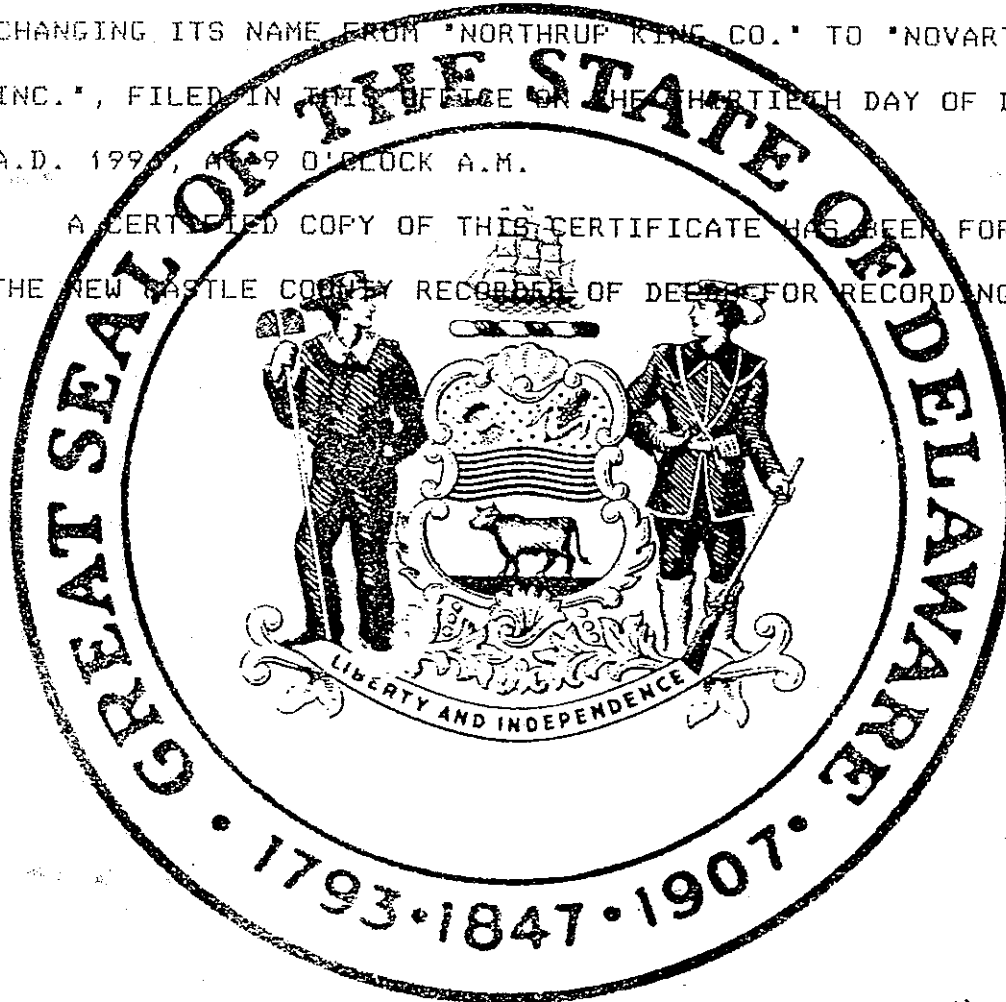
The original Breeder Seed of the variety has about 0.5% plants with purple flowers and imperfect black hila. This variation has been removed by Progeny Row Purification.



Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "NORTHROP KING CO.", CHANGING ITS NAME FROM "NORTHROP KING CO." TO "NOVARTIS SEEDS, INC.", FILED IN THIS OFFICE ON THE THIRTIETH DAY OF DECEMBER, A.D. 1996, AT 9 O'CLOCK A.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDS OF DEEDS FOR RECORDING.



Edward J. Freel

Edward J. Freel, Secretary of State

0829320 8100

960389892

AUTHENTICATION:

8267947

DATE:

12-31-96

CERTIFICATE OF AMENDMENT OF CERTIFICATE OF INCORPORATION
OF
NORTHROP KING CO.

It is certified that:

1. The name of the corporation (hereinafter called the "Corporation") is Northrup King Co.

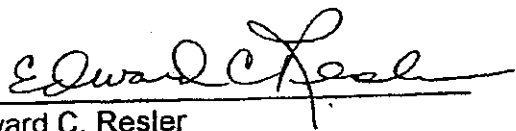
2. The Certificate of Incorporation of the Corporation is hereby amended by striking out Section 1 thereof and by substituting in lieu of said Section the following new Section.

1. The name of the Corporation is Novartis Seeds, Inc.

3. The amendment of the certificate of incorporation herein certified has been duly adopted and written consent has been given in accordance with the provisions of Sections 228 and 242 of the General Corporation Law of the State of Delaware.

4. The effective date of the amendment herein certified shall be January 1, 1997.

Signed on December 27, 1996.


Edward C. Resler
Vice President & Secretary